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MEMORANDUM FOR: Executive Director, NPIC

SUBJECT : Operations Staff Monthly Report - June 1964

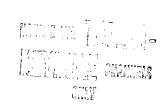
### 1. General

50X1 Together with of IPD, meetings were held with OSA and NRO personnel to discuss the installation of a secure magnetic tape data link between NPIC and NRO, and NPIC and OSA. This will provide NPIC with the capability to receive ephemeris and camera correlation data on all satellite missions in an expeditious manner from the West Coast for input into our computers, transmit the binary clock readout data to the West Coast for incorporation in the refined ephemeris, receive weather information from WECEN useful in plotting and mission planning, and to provide for receipt of inertial navigational data for input into our computers as soon as it becomes available. The concept was approved and arrangements are underway by the Operations Staff for the installation of the necessary communications equipment (KY-3 and Modems) and by  $\rfloor$  for the Univac 50X1 1004. This will necessitate the installation of a conduit connecting the Communications facility with the Computer facility.

b. A meeting was held with the representatives of PSD, CSD, and TID to discuss continued effort in the photomosaic project. It was agreed that the original photomosaics would be filed in PSD and should be used only in emergencies. It was also agreed that: (1) customer service would be provided in the form of minicard prints, minicard film (16mm rolls) or 70 mm film in rolls; (2) PSD would record the photomosaic sheets on 70 mm film; (3) the Assistant for Operations would canvas the community to determine requirements for copies of these sheets; (4) hard copy minicard prints would be provided PID and PAG; and, (5) any copies made of these sheets must be properly controlled.



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TCS-2885-64

SUBJECT: Operations Staff Monthly Report - June 1964

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- c. Arrangements were made with the TCO and TSO/CIA to print the "hash" marks on NPIC reports in black rather than in multiple colors (similar to the new cover sheets) regardless of the control system used. It was also agreed to eliminate the need for printing a SECRET version of all the cover sheets since the use thereof would be so small that it is just as simple to block out the word "top" on TOP SECRET cover sheets.
- d. A revised instruction for the control of documents in multiple security systems was prepared and issued to all staffs and divisions.
- e. Several meetings with representatives of DD/S&T, GMAIC, JAEIC, DDI and Security were attended with regard to the release of KEYHOLE information and materials No final decision was arrived 50X1 at and the matter was referred for recommendation to the COMOR.
- f. During the latter part of the month the Assistant for Operations moved into new quarters and other personnel were moved accordingly. The Program Analysis Branch was transferred to the Assistant for Administration where it became the Management Information Branch under the Chief of the Management Services Staff. New security procedures were developed and implemented as a result of this move.
- g. Arrangements were consumated with the Office of Communications for the temporary loan of a communicator who would receive training in our Commo facility during the summer months. This was most beneficial in that NPIC communicators have been heavily taxed maintaing 24-hour operations during the LUCKY DRAGON, YANKEE TEAM activities. It will also permit the regular personnel to take leave and keep up with the increased cable traffic during the heavy collection period in the summer months.
- h. A paper was prepared for the use of the Steering Group on the need for statistical data in non-PI production.
- i. A history of the URPICs was prepared for the use of the Executive Director in his meetings with representatives of NRO, DIA and CIA to discuss the disposition of the URPICs.
- j. At the request of DIA, attended a two week 50X1 conference at Randolph AFB, Texas for the purpose of writing a course outline for the USAF's advanced PI school to be established at Omaha, Nebraska.

TCS-2885-64

SUBJECT: Operations Staff Monthly Report- June 1964

## 2. Operations Coordination Branch

- a. This branch processed 70 national photo interpretation, 43 national non-PI and 179 support/service requirements. (See Annex B for details). The total requirements processed during June is about the same as for May with only a small increase.
- b. Much time and effort was devoted to operational liaison and mission movement monitoring. The total number of missions flown during the month decreased somewhat (a 7% decrease) and the total number of feet of film received also decreased by 33,798 feet (a 10% decrease). See Annex A.
- c. A total of 193 cables were prepared, processed and dispatched and 705 were received in the NPIC Communications Center, an increase in total traffic over May of 10%. This is the second month in a row showing a decided increase in cable traffic. During the early part of the month, the Commo Center operated on a 24-hour basis because of the heavy traffic of LUCKY DRAGON and cables which required immediate acknowledgment of receipt. OCB also received 1527 cables (a 28% increase over May) from the CIA Cable Secretariat which required review for NPIC action and proper routing.
- d. The branch continued to produce daily reports on the status of <u>Missions Being Processed</u>, weekly <u>Weekend Duty Rosters</u> and agenda and minutes of the Advisory Committee. Considerable effort was devoted to the compilation of statistics and data for incorporation in the <u>History of Aircraft Missions</u> which is now under preparation.

## 3. Program Analysis Branch

- a. During the month a large number of statistical tabulations were provided to operating components as to the manhours expended by function on selected projects. These had to be compiled manually since the computer programs will not be available to do them by ADP techniques until July.
- b. At the end of the month, this branch was transferred to the newly created Management Services Staff under the Assistant for Administration.



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TCS-2885-64

SUBJECT: Operations Staff Monthly Report - June 1964

c. See Annexes C and D for a summary of manpower utilization by component and a summary of project status.

## 4. Briefing Branch

a. During June, the Briefing Branch provided support daily for a week including evenings until about 2200 hours to the DOD Computer Institute, Flag Course No. 3 sponsored by NAVCOSSACT. This course, under the supervision of was a decided improvement over the first two courses with only minor problems arising.

50X1

b. In addition, eight films were shown for the Training Branch/AS in the Geography of the USSR Course and three separate Security Reindoctrination briefings were given in the Briefing Room.

## 5. Support Branch - PAG

- a. This branch continued to provide a high level of support to PAG. The briefing room was utilized on 48 occasions in 42, audio-visual materials employing the briefing boards or teleprompter equipment were used.
- b. Since it was the end of the Fiscal Year relatively few supplies and no equipment was procured.

Assistant for Operations, NPIC

Attachments:
Annexes A-D

Distribution:

Cys 1 & 2 - ExDir/NPIC

3 - OMIB/MSS/NPIC

4 & 5 - OS/NPIC

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MISSION INPUTS

1 January 1964 - 30 June 1964

	·	JAN		FEB	М	AR	1	APR	M	IAY		JUN4	Total	for Reporting Period
Satellite (usable take)	Msn	Foot	Msn	Foot	Msn	Foot	Msn	Foot	Msn	Foot	Msn	Foot	Msn	Foot
КН-4 Ј КН-4 КН-7		· ·	1	38,989 372	1.	1,284	1	2,654	1	2,633	2	61,887	3 4	• 100,876 6,943
TOTAL			.2	39,361	1	1,284	1	2,654	1	2,633	2	61,887	7	107,819
Satellite (non-usable take)								***************************************						
KH-4 J KH-4 KH-7					1		1						2	
O TOTAL					1		1						2	
Aircraft						******								
Cuba China	21	143,539	25	181,558	25 . 1	182,013 11,316	17	108,752	14	90,319	13 1	71,886 5,832	115	778,067 ————————————————————————————————————
Laos/Vietnam SVN/Laos/Camb.	1	6,234	2	17,874	10	69,820	6	39,446					18	127,140
LUCKY DRAGON YANKEE TEAM					47	265,843	39	213,442	30 61	170,892 70,162	22 64	156,146* 12,291	1 138 125	6,234 806,323 82, <sup>4</sup> 50X1
TOTAL	22	149,773	27	199,432	84	539,624	62	361,640	108	339,207	100	246,155	1403	1,835,831
MONTHLY TOTAL	22	149,773	29	238,793	86	540,908	64	364,294	109	341,840	102	308,042	412	1,943,650

\*Footage total incomplete due to delay in film arriving at NPIC

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ANNEX B to TCS-2885-64

### REQUIREMENTS ANALYSIS

## I. <u>National PI Production Requirements</u> (Includes PI and non-PI Requirements)

	<u>Jan</u>	<u>Feb</u>	Mar	$\underline{\mathtt{Apr}}$	May	<u>Jun</u>
CIA	18	8	26	<b>1</b> 5	24	23
DIA	8	. 2	3	9	7	. 2
NSA	3	0	4	6	2 <u>i</u>	8
NRO	0	0	l	0	l	3
USIB	113	78	119	77	56	63 <b>*</b>
NAVY	0	0	Ó	0	0	0
AF	0	1	0	0	0	Ō
ARMY	0	0	0	0	i	Ō
GMAIC	0	0	14	3	11	12
SIC	0	0	l	i	7	2
SAC	0	0	5	1	ò	0
STATE	0	0	Ó	1	0	0
COMOR	0	0	0	0	ļ	0
TOTALS	142	89	173	113	129	113

\*Of the 63 requirements, 25 were requirements for PI services and 38 for non-PI services; all, however, were originated in NPIC in direct response to USIB requirements. The breakdown of the requirements for PI services follows:

- 15 First-phase mission reports
- 4 Second-phase mission reports
- 4 Mission Aids (Briefing Boards)
- 2 Detailed reports

Of the 38 requirements for non-PI services all were mission oriented.

## II. Support/Service Requirements - Receipts

	<u>Jan</u>	<u>Feb</u>	Mar	Apr	May	<u>Jun</u>
USIB CIA NPIC DIA NSA ARMY	0 174 109 36 23	0 114 22 16 12 0	0 146 27 20 12 0	1 119 19 15 3	0 120 9 14 1 2	0 148 14 8 2

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ANNEX B to TCS-2885-64 (Cont)

	<u>Jan</u>	<u>Feb</u>	Mar	Apr	May	$\underline{\mathtt{Jun}}$
NAVY AF COMOR NRO AEC	1 1 1 1	1 1 2 1	0 0 0 1 1	1 0 0 2	0 1 0 2 2	0 3 0 0
SAC	0	0	2 '	0	0 -	0
WHITE HOUSE	0	0	0	0	1	0
TOTALS	350	170	209	161	152	179
TOTALS - Requ	<u> irements</u>	Processed				
	492	259	382	274	281	292

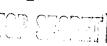
## IV. Analysis of Trends

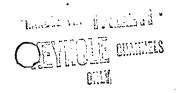
III.

- a. The National PI production requirements were normal for the month of June. There was a slight drop in total number of submissions which was a reflection of the slight decrease in inputs.
- b. June was a normal month for Departmental Support/Service requirements with CIA continuing to be the Agency requesting the largest amount of support. Once again the Photo Lab received the bulk of the support requests which were photo reproduction orders.



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ANNEX C to TCS-2885-64

## PROJECTS STATUS REPORT

## National PI Production

	Feb	Mar	Apr	May	<u>Jun</u>
No. Established During Month	85	176	111	106	<u>1</u> /
No. Completed During Month	138	105	102	60	99
No. Cancelled During Month	55	1	52 -	8	. 2
No. on Hand at End of Month	157	227	184	<u>2</u> / 216	223

### II. Support to Departmental PI

No. Established During Month	(Figures for Feb -	89	77	<u>1</u> / 94
No. Completed				
During Month	Mar not available)	85	56	96 .
No. Cancelled				
During Month		0	0	0
No. on Hand at			3/	
End of Month	(225)	229	252	250

#### III. Non-PI Services

No. Established During Month	(Figures for Feb -	60	58	<u>1</u> /
No. Completed During Month	Mar not available)	56	-35	57
No. Cancelled				^
During Month No. On Hand at		<del>_</del>	3	<u> </u>
End of Month	(267)	270	290	293

Projects received counted for period 30 May thru 27 June 1964 Adjusted after thorough check of records to 216 from 222

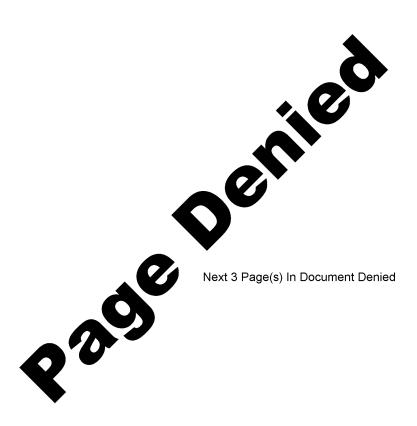
Adjusted after thorough check of records to 252 from 250

ANNEX C to TCS-2885-64

## IV. Analysis of Trends

The number of national PI production projects established during the month remained at about the same level, but the number of projects completed rose considerably (65% increase); since the number of projects completed nearly equated the number of projects established, there was only a minor increase in the number of projects on hand at the end of the month.

There was a sizeable increase in the number of projects established in support to departmental PI (22%) and in the amount of these projects completed (71%), but since the number established and the number completed were about the same little change was noted in the number on hand at the end of the month.



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NPIC/P&DS-111/64 8 July 1964

MEMORANDUM FOR: Assistant for Administration

SUBJECT:

Monthly Activity Report

### GENERAL STAFF OCCURRENCES:

The 1964 fiscal year closed out with NPIC's R & D effort completing its planned expenditures for this period. Even though dollars was expended for programs and projects not anticipated during the preparation of NPIC's fiscal 1964 R & D budget, it was the comment of the Chief of Budget, Programs and Manpower Division that NPIC had the best planned and managed R & D program of any they had worked with in the Agency. Some of NPIC's planned programs were not contracted in FY/64 due to unavailability of funds. These will be submitted early in FY/65 in order not to incur additional delays. However, money required for these deferred items will decrease the amount available for the fiscal 1965 anticipated R & D program.

Planning was re-initiated by the Assistant for Plans and Development for a prototype equipment test and evaluation area in NPIC. Work had been done previously to define this problem with DMJM, but such an area failed to materialize in Bldg. 213 as the building was completed.

ex-chief, Graphical Analysis Branch,
Publications Division, reported on duty this month as Executive
Officer, Plans and Development Staff.

Training and vacations cut heavily into available man power and this situation is expected to continue through August.

attended the Agency Management course for one week at and 50X1 attended the Civil Service Commission Seminar on "Effects of Technological Development" at Kings Point, New York for two weeks.

entered on duty at the beginning of the month.

Activity increased regarding the DIA nomination of a Deputy Assistant for Plans and Development.

The Plans and Development Staff FY/65 T.O. breakdown was submitted to the Assistant for Administration, based on a total Staff strength of

50X1

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1	June	- Met with Itek, concerning plans for their Alexandria, Va., Data Analysis Center.	50X1
3	June	- Attended briefing of Optics Panel, re proposed programs.	50X1
4	June	- Travelled to Rochester, N. Y. to attend discussion of proposed new S/I camera.	
8	- 12 June	- contract technical assistant, at NPIC all week for consultation.	50X1
9	June	- Met with, DD/S&T about plans for forthcoming meeting of Image Quality Evaluation Committee.	50X1
10	June	- Met with about their contract.	50X1
11	June	- Briefed Optics Panel, on proposed programs.	50X1
12	June	- Met with about potential conflicts of interest by	50X1
15	June	- Met with Optics Panel, about image re-construction techniques.  Met with about P. I. Performance Effort.	50X1
17	June .	- Met with systems. Itek, re proposed	50X1
18	June	- Discussed proposed programs with IMSC.  Met with FMA, about current contracts.	50X1 50X1 50X1
19	June	- Met with to discuss capabilities of Farrand Optical Co.	50X1
26	June	- Attended budget hearing at Headquarters.	
30	June	- Met with Itek to discuss side-looking radar problems.	50X1

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### DEVELOPMENT BRANCH

The primary effort during the month was devoted to assisting the Procurement Division, Office of Logistics, in formalizing contracts and clarifying technical issues raised at Procurement Evaluation Committee Meetings and in discussions with contractor's representatives on the details of work to be accomplished under new development contracts. Contracts were prepared for all projects except two programmed for FY-64 prior to the end of the year. Only the rental agreement for an Electracolor printer-processor (MMM) and the contract for the development of the HTA-6 processor (Houston-Fearless) were deferred until FY-65.

The pressure of this primary effort left little time for the implementation of the more formalized accounting and reporting procedures envisioned for the branch during June. However, the improvement of management practices is of continuing concern to the branch and will be pursued with vigor in the coming months. Progress was made in defining the function of requirements and phasing in of a centralized equipment maintenance operation. The staff study on maintenance is in preparation and is expected to be presented for approval in mid-July. Listed below are statistics relevant to Branch operations during June:

1.	Project Status	Initiated	In Work	Completed
	Major (more than 40 man hours)	1.	81	0
	Minor (less than 40 man hours)	4	2	2

2. Research and Development Objectives

In work 0 Completed 1

3. Proposal Status

Received 7 In work 18 Rejected 2 Accepted 2

4. Project Approval Requests

In work 0 Completed 1

5. Contract Status

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5.	Contract Status Continue	d		50X1
		Number		501
	Pending Obligations	23	\$	
	Contracted this Month	11		
	Contracted this FY-64	63		
	Completed this Month	2		
	Current Total Contracts	50	\$	

During the month there was 30 conferences held with government and industry representatives consuming 81 man hours of branch time. Notable among these conferences were the presentation of the Air Force development program for reconnaissance and the complete review of the projects in work under the Eastman Kodak AL-14 Contract.

Travel was again heavy in June due to an effort to ascertain the status of development under existing contracts and to assure that new contracts were started off in the intended direction. In addition, new technological discoveries were reviewed for application to NPIC's requirements. Following are listed the trips made and their purposes:

in Plainview, New York, to inspect and run final in-plant acceptance checks on the Stereo Chip Comparator.	JUX 1
8 - 9 June - visited Eastman Kodak in Rochester, New York to monitor seven PARs under Contract AL-14.	50X1
8 11 June - visited Data Corporation and discussed photometric instrumentation for camera operation evaluation. He also discussed the same subject at ASRNR -	50X1
Wright-Patterson AFB, with On the 10th Mr. visited ACIC, St. Louis, Mo. On the 11th he visited Eastman Kodak for review of AL-14 projects.	50X1 50X1
8 - 11 June - had a conference with of Eastman Kodak to discuss Contract AL-14.	50X1 50X1
9 - 10 June - visited Optomechanisms on the 9th to assist in monitoring the Point Transfer Device, Model 552 and associated 552A Stereoviewer contracts. On the 10th	50X1 50X1
he visited Eastman Kodak to assistin monitoring three projects under Contract AL-14.	50X1
9 June - accompanied to Optomechanis	50X

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10 - 12 June - visited Eastman Kodak to nonitor progress on two projects under Contract AL-14. On the 2th he visited Bausch & Lomb to monitor progress on the Panoramic Stereoviewer and the Variable Magnification Tracing Projector and to discuss changes on the production model High Power Stereoviewer.	50X1
	50X1 50X1
16 June - Trisited the GE Advanced Technology Lab in Schenectady, New York to witness a physical demonstration of the "Hologram" concept to facilitate a collective evaluation of the GE concept for its potential in automatic PI applications. The object of the visit was to evaluate the possible contribution to the state-of-the-art that may accrue from an R & D effort by GE in this area.	50X1
Systems on the 22nd to see a demonstration of photographic systems under development in the Bell Laboratories. On the 23rd they visited Aeronutronics (Division of Ford Motor Company) to discuss image recognition systems. The 24th they visited the Pickett Corporation and Te Corporation, Santa Barabara, California, to establish company capability and determine progress on a new PI slide rule. The 25th they visited the Houston-Fearless Corporation	50X1 on
to establish the technical details for the processor research program. On the 26th they joined at Houston-Fearless in Los Angeles to discuss the chip processor, whip printer compatibility, and chip storage and retrieval.	50X′
22 - 27 June - visited the 5	50X1
Richardson Camera Company to monitor contracts on viewers and readers on the 22nd. On the 23rd they visited to review the status of contracts in progress and under negotiation with Nuclear Research Instruments. On the 24th they visited NRI to review progress on Contract 934 and the Varyscan Viewer. On the 25th they visited Telecomputing Corporation, Electronic Systems Division, to review progress on the Linear Phasolver. They also visited Consolidated Systems to review progress on the development of a fluorescent screen. On the 26th they	50X1
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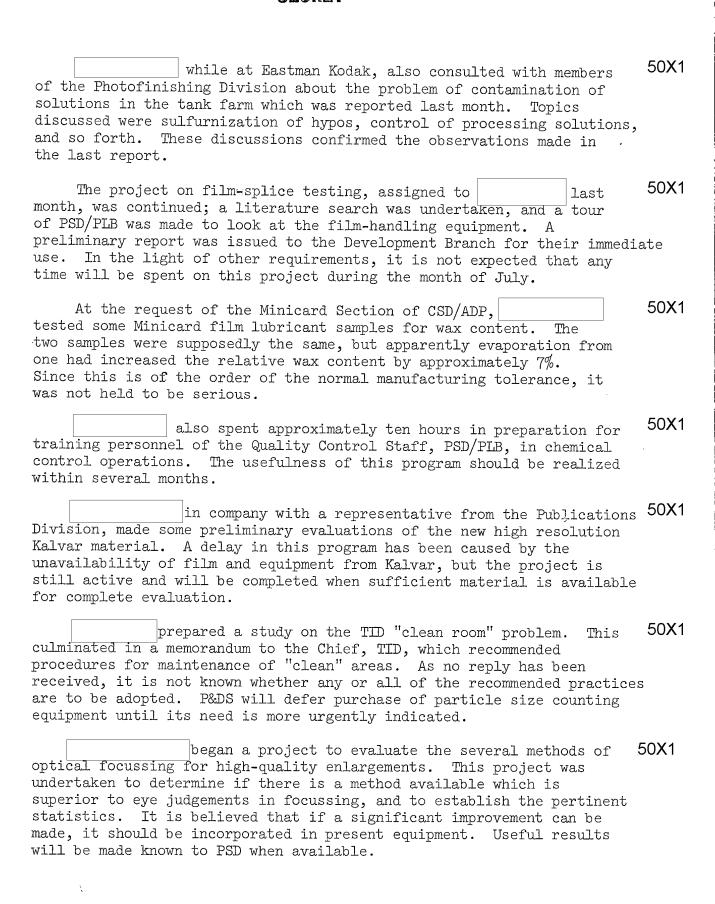
visited the University 50X1 23 - 24 June of Rochester for transfer of monitorship of the aspheric lens contract. This trip required for orientation, monitoring continuity, and project status check for the last quarter. 29 - 30 June -50X1 visited Goodyear Aerospace Corporation in Akron, Ohio to discuss the "Change Detector" Contract 723. PLANS BRANCH continued work on a re-draft of a staff study concerning 50X1 the objectives and functions of the Technical Development Committee and the Joint Procurement Committee. The results of this study should be forthcoming shortly. Further consideration of the P&DS Staff Study "Advanced Planning Concept for Technical Development" is being held up pending receipt of comments from two components. 50X1 began a long range program to provide the NPIC with planned courses of action in the event of the necessity of establishing small NPIC type operations outside of the continental limits of the U.S. held several meetings with NPIC and Eastman Kodak 50X1 representatives to devise a means of titling the film used in a new photo reconnaissance system. An apparently acceptable method was found, and further work is being carried on. 50X1 separately requested PAG and PID to devise a method of using the Universal Photo Coordinate Reference System with a new film format that contains no fiducial marks and no reference marks. A solution is necessary before the film can be exploited. 50X1 conducted a briefing on Air Force reconnaissance systems for a group of selected NPIC representatives. DD/S&T/OSA is sponsoring the initiation of a new field of overhead reconnaissance. A contract has been let, and 50X1 alternate project monitor. This represents considerable progress for NPIC since it gives us the valuable opportunity of coordinating the acquisition capabilities with the exploitation capabilities and of feeding exploitation experience and objectives back into the design of the new system. [ is closely monitoring developments of other 50X1 new photographic reconnaissance systems in order that appropriate Center components can be advised as early as possible.

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Agreements were obtained from PAG, PID, Army/SPAD and DIA/DIAP-1P to participate in the exploitation testing of Project HISPEC (High Altitude Spectralzonal Photography). hotified the project 50X1 manager and offered suggestions generated by the NPIC. This is one of five activities in the field of Color Photography that are currently 50X1 Color Photography in one form or being coordinated by another appears to hold the most promise to photo interpretation of any of the "special sensors". Action has been initiated by the Plans Branch on a Staff Study concerning the origin, use, and control of chips in the NPIC. It is important that the problems be solved and procedures for production and control of chips be established before the Center embarks on the production of standard chips. A meeting was held between Itek and P&DS representatives to discuss an Itek/OSA Project for the production and exploitation of sidelooking radar imagery. This project permits the NPIC to participate in the R & D phases of radar imagery acquisition and exploitation and provides the lead-time needed for the development of exploitation is coordinating the action between Itek/OSA equipment. 50X1 and NPIC. is working on the first draft of a staff study on the 50X1 security aspects of the cover currently being used by the Plans and Development Staff. EXPLORATORY DEVELOPMENT LABORATORY BRANCH completed his investigation of the heating problem in 50X1 the Richardson Viewer, and by suitable modification was able to drop the temperature as much as  $70^{\circ}F$  under some operating conditions from a maximum of 204°F. By utilizing a small blower mounted on the rear of the viewer, and with a minimum of modification to the equipment, the heat generated by the presence of a 9-inch film in the platen can be held within reasonable limits. It is felt that a further drop in operating temperature must be achieved by a basic equipment re-design. A report on this project will be issued during July. completed his literature search on adjacency effects 50X1 in photographic materials. To accomplish this, he visited the libraries of Kodak Research Laboratories, Rochester Institute of Technology, and the George Eastman House in Rochester, New York, where he spent approximately three days. Additional time was spent in the NPIC and Langley libraries completing this search. Preliminary experimental considerations have been based on the search, and has begun 50X1 design of some special processing equipment necessary for the precise control required for these investigations.

## SECRET



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50X1 continued work on the development of photographic phase gratings. visited Diffraction Limited, 50X1 Inc., of Bedford, Mass., early in June to test an experimental crossed grating in the breadboard model of the virtual image viewer. These tests proved highly successful, and the gratings definitely are feasible for use in the viewer. A second visit was made at the end of the month to provide that company with two gratings for experimental purposes. These represented a decided improvement in quality and dispersion over the one tested in early June. A mathematical analysis of the Fraunhofer Pattern produced by such gratings was furnished by Technical Operations, The analysis confirmed the non-analytical conclusions reached about the physical behavior of the gratings under coherent illumination and provided an indication of the actual groove-shape. The phase gratings have excited several industrial firms. Those who have been trying to develop them have shown enough particular interest in their manufacture to indicate that they do not have the process to equal that developed in our laboratories. In whew of this, a Record of Invention was forwarded to the CIA Patent Board, via DD/S&T. A 50X1 Suggestion Award Form will be submitted in the early part of July recommending the use of these gratings in the virtual image viewer.

Assistant for Plans and Development

50X1

Distribution:

Orig & 1 - Addressee 2 - P & DS